

WHAT IS CLAIMED IS:

1. A method of manufacturing an electroconductive film, comprising the steps of:

5 forming a film containing a photosensitive material and an electroconductive material therein on a substrate;

10 conducting an exposure to form a latent image on the film formed in the film forming step by irradiating a light onto a desired region of the film in different exposures respectively at the center area and peripheral area of the desired region;

conducting a development to form a development image of the film by removing a non-latent image region of the film after said exposing step; and

15 baking the development image formed in said developing step.

2. A method according to claim 1, wherein the light is irradiated for a plurality of times and the 20 latent image is formed with a size different from that of the first light irradiation by the second and subsequent light irradiation in said exposure step.

25 3. A method of manufacturing an electroconductive film, comprising the steps of:

sequentially repeating a film forming step of forming a film containing a photosensitive material and

an electroconductive material therein and an exposure
step of irradiating a light onto a desired region of
said film formed in said film forming step for a
plurality of times to laminate said films on each other
5 into a laminate film where the latent images of the
respective layers are integrated into a laminate latent
image;

10 developing the latent image into a development
image by removing a non-latent image region of said
laminate film after the formation of said laminate film
together; and

15 baking said development image formed in said
developing step.

20 4. A method according to claim 3, wherein the
latent images of the laminated second and subsequent
layers are formed with a size different from that of
the first layer on the substrate in said laminate film
forming step.

25 5. A method according to claim 2 or 4, wherein an
opening region of an opening portion of a mask having
said opening portion for irradiating a light onto a
desired region of said film is changed to form said
latent image with a different size in said exposure
step.

6. A method according to claim 2 or 4, wherein a distance between a mask having an opening portion for irradiating a light onto a desired region of said film and said film is changed to form said latent image with
5 a different size in said exposure step.

7. A method according to any one of claims 1 to 6, wherein a film thickness after said baking step is 5 μm or more.

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8. A method of manufacturing image forming apparatus comprising the steps of:

forming a first and second wirings in a matrix according to the electroconductive film manufacturing
15 method recited in any one of claims 1 to 7 so that an insulating layer is interposed between the first and second wirings at an intersection of the first and second wiring;

20 forming an electron emission element at the intersection of the first and second wirings; and

providing an image forming member which forms an image by using electrons emitted from the electron emission element.

25 9. A method of manufacturing an electroconductive film, comprising the steps of:

forming a film containing a photosensitive

material and an electroconductive material therein on a substrate as a film forming step;

5 irradiating a light onto a desired region of said film containing the photosensitive material and the electroconductive material therein which has been formed in said film forming step for a plurality of times as an exposure step;

10 removing a non-exposed region where the photosensitive material is a negative type or an exposed region where the photosensitive material is a positive type, exposed in said exposure step of said film having the exposed region and the non-exposed region as a developing step; and

15 baking said film which has been subjected to said developing step as a baking step.

10. A method of manufacturing an electroconductive film, comprising the steps of:
sequentially repeating a film forming step of
20 forming a film containing a photosensitive material and an electroconductive material therein on a substrate and an exposure step of irradiating a light onto a desired region of said film containing the photosensitive material and said electroconductive
25 material which has been formed in said film forming step for a plurality of times to form a laminate film into which a plurality of films each having an exposed

region and a non-exposed region are laminated;

removing the non-exposed region of said laminated film where the photoconductive material is a negative type or the exposed region of said laminated film where
5 the photoconductive material is a positive type; and

baking said laminate film that has been subjected to said developing step.

10 11. A method according to claim 9 or 10, wherein
said film forming step coats a paste containing said
photosensitive material and said electroconductive
material therein on said substrate.

15 12. A method according to claim 9 or 10, wherein
said electroconductive material is metal.

13. A method according to claim 9 or 10, wherein
said electroconductive material is electroconductive
grains.